



028e

SINGLE
**ELECTRIC
SLIDING
PLUG DOOR**
LITE



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SINGLE **ELECTRIC** **SLIDING PLUG DOOR** *LITE*

COMPACT AND LIGHT 028e, HIGH-PERFORMANCE SINGLE SLIDING DOOR FEATURING SMOOTH MOVEMENT, PERFECT SEALING, NOISE REDUCTION.

- 1-leaf door.
- Electric Sliding plug door System 24v.
- Low height mechanism, ideal for vehicles with little upper clearance.
- Lightest mechanism: The weight of the System is reduced by 20%.
- Suitable for all class I vehicles, it is ideal for double-decker buses and autonomous vehicles.
- A self-locking mechanical system that prevents the door from opening once it's completely closed.
- Pneumatic emergency system including Masats pushbutton with cover.
- Tested for 1.5 million cycles.
- Triple safety system: Electronic detection, safety edge, encoder.
- Kinematics designed to achieve a harmonious movement.
- High availability: MDBF over 350.000 kms.



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ADVANTAGES



SAFETY

- Self-locking mechanical system that prevents the door from undesired opening.
- Obstacle detection when closing with a safety edge on the front rubber seal.
- Enhanced obstacle detection with safety edge pursuant to more restrictive specifications.
- Obstacle detection by motor electronic control.
- Fast pneumatic emergency system.
- Emergency reset of the Masats emergency module from the driver's dashboard.
- Emergency cancellation when vehicle is in motion.
- The **safe start** feature prevents the vehicle from moving if the doors are not fully closed and locked.

OPTIMISED
MECHANISM
HEIGHT
165 mm



HIGH RELIABILITY

- Excellent performance tested with the most demanding durability tests.
- Anti-vandal System, outside forces do not affect the motors.
- Two DCU available: Evolution, for high level of self-diagnosis, Protech DCU when only basic services are required.
- The highest standards pursuant to ISO16750: climatic, mechanical & electric loads. (Option DCU Evolution).



EXCELLENT DOOR PERFORMANCE

- Smooth movement.
- Fast opening time <3 seconds (for W=1000 portal).
- High speed with smooth start+end movement.
- Excellent vibration behavior:
Designed against rattling.
- Guidance System stabilizes the door horizontally. Vertical stability when door is close.
- A self-adjusting function.
- Enhanced sealing improves water tightness and reduce noise for a better passenger experience.
- Good performance in inclined surfaces and slopes.
- Minimum occupation of interior space.
- Optionally: parallel or inclined motion option opening inclined <100 mm.



LOW LCC

- Weight reduction of the System reduces the vehicle's consumption.
- Quick installation. Few regulation operations required.
- Auto-adjustment system.
- Encoder integrated in Motor. No adjustment required.
- Improved start-up for progressive movement reduces vibrations and LCC costs.
- Low maintenance.
- Excellent guidance and control enlarge product life.
- MDBF: 350.000 kms.

TECHNICAL DATA

- Suitable for vehicle class I and II.
- Standard service conditions: 27.5 VDC, 8 bar, flat Surface.
 1. Operating pressure = 4-10 bar.
 2. Operating voltage = 18-32 VDC.
 3. Communication voltage range: 18-36 VDC.
 4. Voltage range without damage: 0-48 VDC.
 5. Temperatures:
 - Operating = -30 / +70 °C.
 - Storage = -40 / +85 °C.
 - Environmental requirements pursuant to UNE EN 60068-2.
- Portal measures:
 - Width: 750-1150 mm.
 - Net opening: 1025 mm for 1150 mm portal.
 - Mechanism height: 165 mm.
 - Assembly tolerances:
 - Width +/- 2 mm.
 - Height +/- 5 mm.
 - Diagonal dimensions +/- 12 mm.
- Cycles: 1.500.000 cycles.
- Manoeuvring speed: 3 seconds ±0.5 for a portal measuring 950 x 2000 mm.
- Operating slope:
 - Front = ±21%.
 - Side = ±10%.
- Reversible motor: with encoder and motor brake.

NORMS

- Electromagnetic compatibility pursuant to R10.
- R107 compliant.
- Fire behavior pursuant to R118.03.
- Pursuant to Regulation 43 – safety glazing.
- Software designed pursuant to ISO 26262.

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1 PIECE ALL-ROUND SEALING, FOR
A BETTER NOISE AND VIBRATION
PERFORMANCE

RUBBER SEALING THAT SURROUNDS THE DOOR



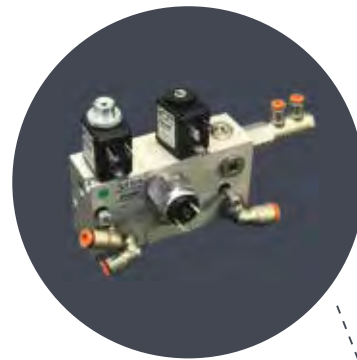
NEW MODULAR LOCK

ALLOW DIFFERENT CONFIGURATIONS

(square key, lock key)

INCLUDING HANDLE

PNEUMATIC EMERGENCY
MASATS CONTROL VALVE



SINGLE GLAZING AS STANDARD

DOUBLE AND HEATED GLASS OPTIONAL



MASATS EMERGENCY
PUSH-BUTTON



ANTIVIBRATION
VERTICAL STABILIZER

DCU EVOLUTION



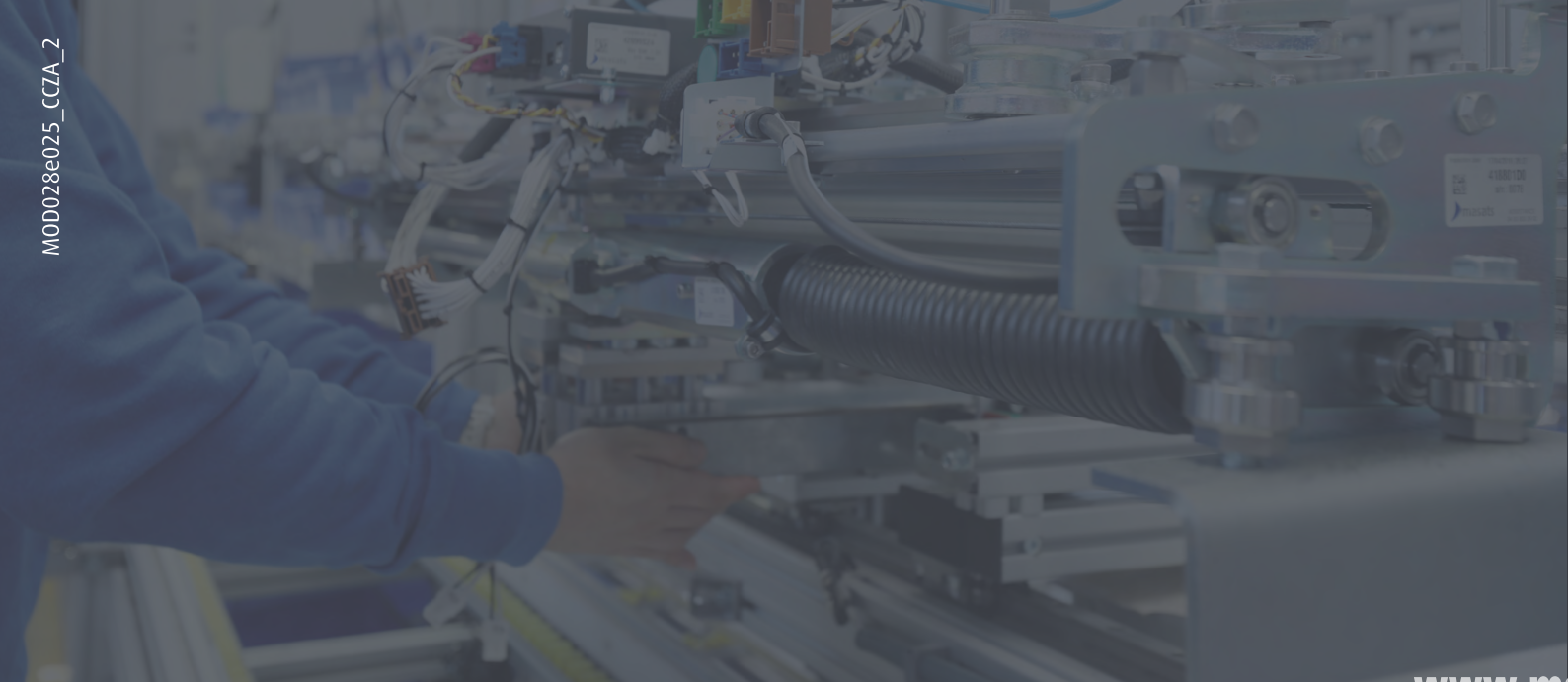
To offer operators maximum
reliability and added value.

- Designed for safety.
- State-of-the-art electronics.
- A high level of self-diagnosis.
- Prepared for predictive maintenance.
- Software development pursuant to ISO 26262.
- Communication by CAN bus, J1939-compliant.
- Customer-configurable functionality.
- With LED diagnosis.
- Windows compatible ECU monitoring software.
- The predictive service is available as an option.
- Prepared for UDS Services and J1939 DM1s.
- Same part nr. for door and ramp control.
- Pursuant to ISO21434(Ciber) and ISO24089 (SW Update), necessary for R155 and R156 vehicle homologation.
- Pursuant to ISO 16750 Electrical, mechanical and environmental loads.

DCU PROTECH

- High reliability/Proven Service (more than 20 years controlling urban doors).
- Parameterizable.
- With LED diagnosis.
- Communication by CAN Bus J11939_compliant.
- Customer-configurable functionality.
- Windows compatible Genio Software.
- Pursuant to ISO21434(Ciber) and ISO24089 (SW Update), necessary for R155 and R156 vehicle homologation.





www.masats.es



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